UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/115,229	07/14/1998	ANDRE SCHEELEN	SLVAY-3741.0	1150

26694 7590 07/18/2002

VENABLE, BAETJER, HOWARD AND CIVILETTI, LLP
P.O. BOX 34385
WASHINGTON, DC 20043-9998

EXAMINER
DYE, RENA

ART UNIT	PAPER NUMBER
3627	

DATE MAILED: 07/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/115,229	SCHEELEN ET AL.	
	Examiner	Art Unit	
	Rena L. Dye	3627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7 and 10-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7 and 10-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☒ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Introduction

1. In view of newly found references which have come to the Examiner's attention, the present application has been withdrawn from allowance and the claims returned to pending status. Furthermore, the previous rejections of record have been repeated to clarify any confusing issues which may have occurred during the recent examination of the present application.

New Grounds of Rejections

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1,2,4,7,15,16,17 and 20-21 rejected under 35 U.S.C. 102(b) as being anticipated by Takeda (4,847,150).

Takeda teaches a mixture of 52% by weight of high density polyethylene having a density of 0.960 g/cc or 960 kg/m^3 and a melt index of 0.3; a 35% by weight of polystyrene; and 13% by weight of a hydrogenated styrene/butadiene block copolymer. 0.1% by weight or .1923 part of talc was added as a nucleating agent. The resultant mixture was dryblended in a mixer and then thoroughly kneaded in a kneading extruder to obtain a resin mixture as a base material (column 19, lines 10-19; Example 3). Takeda teaches the broad recitation of the composition formed into a shaped article (claims 20-21). Since Takeda teaches that which appears to be

identical with the composition/article recited in the present claims, the claimed properties would be inherent to the composition/article disclosed by Takeda.

The phrases "for the manufacture of pipes and pipe couplings" (claim 15) and "wherein talc is added in an amount effective to increase a creep resistance of said pipes and pipe couplings made of said composition" (claims 16,17) only refer to the intended use of the composition and are therefore, given little or no patentable weight.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 3,5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeda (4,847,150).

Takeda has been previously discussed and fails to specifically teach the claimed particle size, and the specific polyethylene chosen from ethylene homopolymers and copolymers, in total, from 0.01 to 10 mol% of comonomers.

It would have been obvious to one having ordinary skill in the art to have chosen from a variety of different sized particles depending on the desired end result. Choosing specific ethylene homopolymers and copolymers within particular percentage ranges is well known in the art in making high density polyethylenes. Since Takeda teaches the specific recited density and teaches within the range of the recited melt index, it would have been obvious to one having

ordinary skill in the art to have selected an ethylene homopolymer or copolymer within the claimed range.

6. Claims 1,2,4,7,15,16,17 and 20-21 rejected under 35 U.S.C. 102(b) as being anticipated by Park (4,762,860).

Park teaches a high density polyethylene (HDPE) having a 0.6 melt index and a density of 0.963 g/cc or 963 kg/m^3. The HDPE granules were mixed with 0.05 pph (part per hundred) of talc (column 16, lines 59-65; Example VII). This is equivalent to the composition comprising 100 parts by weight HDPE and 0.05 part talc. Park teaches the broad recitation of the composition formed into a shaped article (claims 20-21). Since Park teaches that which appears to be identical with the composition/article recited in the present claims, the claimed properties would be inherent to the composition/article disclosed by Park.

The phrases "for the manufacture of pipes and pipe couplings" (claim 15) and "wherein talc is added in an amount effective to increase a creep resistance of said pipes and pipe couplings made of said composition" (claims 16,17) only refer to the intended use of the composition and are therefore, given little or no patentable weight.

7. Claims 3,5 and 6 are rejected under 35 U.S.C. 103(a) as being obvious over Park (4,762,860).

Park has been previously discussed and fails to specifically teach the claimed particle size, and the specific polyethylene chosen from ethylene homopolymers and copolymers, in total, from 0.01 to 10 mol% of comonomers.

It would have been obvious to one having ordinary skill in the art to have chosen from a variety of different sized particles depending on the desired end result. Choosing specific ethylene homopolymers and copolymers within particular percentage ranges is well known in the art in making high density polyethylenes. Since Park teaches the specific recited density and teaches within the range of the recited melt index, it would have been obvious to one having ordinary skill in the art to have selected an ethylene homopolymer or copolymer within the claimed range.

8. Claims 1,2,4,7,15,16,17,20 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Akiyama et al. (4,806,293).

Akiyama et al. teaches a resin of a high density polyethylene (HDPE) having a melt index value of 0.5 - 20 and containing 0-0.05 part by weight of talc per 100 parts by weight of polyethylene (column 3, line 67 to column 4, line 19). The Table in column 6 teaches that the HDPE used has a density of 0.965 g/cm^3 and 0.963 g/cm^3, or 965 kg/m^3 and 963 kg/cm^3. Akiyama teaches the broad recitation of the composition formed into a shaped article (claims 20-21). Since Akiyama teaches that which appears to be identical with the composition/article recited in the present claims, the claimed properties would be inherent to the composition/article disclosed by Akiyama.

The phrases "for the manufacture of pipes and pipe couplings" (claim 15) and "wherein talc is added in an amount effective to increase a creep resistance of said pipes and pipe couplings made of said composition" (claims 16,17) only refer to the intended use of the composition and are therefore, given little or no patentable weight.

9. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Akiyama et al. (4,806,293).

Akiyama et al. has been previously discussed and fails to specifically teach the claimed particle size. It would have been obvious to one having ordinary skill in the art to have chosen from a variety of different sized particles depending on the desired end result.

Repeated Rejections of Record

10. Claims 1-7,15-17, and 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jenkins et al. (5,049,411).

Jenkins et al. teaches a high density polyethylene (HDPE) composition comprising from about 50 to about 95 weight percent of HDPE and from about 1 to about 30 weight percent of a filler which may be talc (Abstract). The term high density generally refers to densities in the range of about 0.94 to 0.965 g/cm^3. The term polyethylene as used herein includes homopolymers of ethylene and copolymers of at least about 85 weight percent ethylene with up to about 15 weight percent of one or more C_3 to C_{10} alpha-olefins, such as 1-butene, 1-hexene, etc. Preferably the copolymers include from about 0.1 to about 3 weight percent of the alpha-olefin comonomer (column 1, lines 56-66). The talc is employed as a filler in the composition. In particular when used with HDPE the talc is preferably in the form of particles of a size in the range of about 0.5 to 50 microns. The talc is employed in amounts ranging from about 1 to about 30 weight percent. Jenkins et al. further teach shaping of the composition into an article such as a packaging material, or an envelope (column 1, lines 32-36). The composition is

formed into a seamless tube by extrusion and then later formed into an envelope (column 2, line 50 to column 3, line 10).

Since Jenkins et al. teaches that which appears to be identical to that recited in the present claims, with respect to HDPE, it is the Examiner's position that the recited melt flow would be inherent. The recited particle size distribution between 0.2 and 15 microns, and mean particle size between 1 and 5 microns would be well within the disclosed particle size range taught by Jenkins et al.

Since Jenkins et al. teach talc merely used as a filler, it would have been obvious to one having ordinary skill in the art to have used less filler if e.g. manufacturing costs were not an issue. Since Jenkins et al. teaches talc having a lower end range of 1%, the Examiner would like to note that only a very slight decrease in the weight % of talc would fall within the presently claimed range, i.e. .94 wt%, .95 wt%, etc.

The recited "talc is added in an amount effective to increase a creep resistance of said composition" and "wherein the composition is characterized by creep resistance (t), wherein t=creep resistance expressed in terms of time to fracture, measure according to ISO Standard 1167 (1996) at 20 C on a pipe having a diameter of 50 mm and a thickness of 3 mm and under a circumferential stress of 12.4", would be met by the polyethylene composition made obvious by Jenkins et al.

The added limitation "for manufacture of pipes and pipe couplings" only recites the intended use of the composition, and is given little patentable weight.

11. Claims 1-7,10-17 and 18-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wooster et al. (5,631,069).

Wooster et al. teaches a polyethylene composition used to mold articles. The molded material is comprised of high molecular weight linear polyethylene and a substantially linear ethylene/ -olefin interpolymer. The material has a density in the range of about 0.923 to about 0.95 g/cm^3 and has excellent impact resistance (Abstract). The polyethylene material can be molded into articles, such as pipes, tubes, or molded parts (column 1, lines 23-31). The molded material can be made produced from blends of a) high molecular weight high density polyethylene (HDPE) and b) linear low density polyethylene (LLDPE), VLDPE, etc. (column 4, lines 1-11).

Both HDPE and LLDPE are prepared in a similar manner where ethylene is copolymerized with an -olefin such as butene or hexene (column 4, lines 47-62). Although not generally required the molded material can also contain additives to enhance antiblocking and coefficient of friction characteristics including talc (column 14, lines 13-29). The molded polyethylene material can be produced by known processes, for example by casting processes, compression molding, or preferably, by extrusion (column 13, lines 45-48). Although not expressly taught, it is the Examiner's position that the teaching of injection molding is a well known and conventional process for making pipes, and would have been an obvious method for making the disclosed articles.

Since Wooster et al. teaches that it is known to include additives, such as talc, in molded polyethylene compositions, it would have been obvious to one having ordinary skill in the art to have included the talc in an effective amount to have imparted antiblocking and coefficient of friction characteristics. The determination of such amount of talc to impart such properties is deemed to be routine optimization and well within the level of skill of the ordinary artisan.

Furthermore, it would have been obvious to one having ordinary skill in the art to have used more or less of the talc additive if manufacturing costs were of an issue.

Although Wooster et al. specifically fails to teach the molding of pipe couplings from the polyethylene composition, pipe couplings are *prima facie* obvious over the teaching of pipe. Pipes and couplings are designed to work in the same system, and a pipe may well be used as a coupling, i.e. if it is used as an intermediate between two pipes it has "coupled" the two pipes.

Since Wooster et al. teaches that which appears to be identical to that recited in the present claims, with respect to the presently claimed polyethylene, it is the Examiner's position that the recited melt flow would be inherent. The recited particle size distribution is between 0.2.

The recited "talc is added in an amount effective to increase a creep resistance of said composition" and "wherein the composition is characterized by creep resistance (t), wherein t=creep resistance expressed in terms of time to fracture, measure according to ISO Standard 1167 (1996) at 20 C on a pipe having a diameter of 50 mm and a thickness of 3 mm and under a circumferential stress of 12.4" would be met by the polyethylene composition made obvious by Wooster et al.

The added limitation "for manufacture of pipes and pipe couplings" only recites the intended use of the composition, and is given little patentable weight.

Comments

12. After a careful review of the Declaration filed on August 29, 2001, it is the Examiner's position that the Declaration is not be sufficient to overcome the rejections under 35 USC 103 as being unpatentable by Jenkins or Wooster, as previously set forth by the Examiner and as reinstated above, in particular with respect to the composition claims. The expression "for the manufacture of pipes and pipe couplings" as recited in claims 1-7 and 15-17 do not differentiate the claimed polyethylene composition from the polyethylene composition taught by the applied

prior art references. The Declaration, referring to a composition appears to be formed into a pipe and the creep resistance of the pipe measured. Therefore, the Declaration is deficient with respect to "a composition".

Applicant's specification at page 2, second full paragraph, discloses: *the present invention ...provides compositions which make possible the manufacture of shaped articles, such as pipes, for which the creep resistance is significantly improved without affecting the other mechanical properties of the of the shaped articles, such as the resistance to the slow propagation of cracks (stress cracking or ESCR).*" It appears that the recited "creep resistance" property is a property of the shaped article made from the composition, and not that of the composition itself.

Terms that merely set forth intended use for an otherwise old composiion do not differentiate the presently claimed composition from those known in the prior art. Presently claimed terms must define some characteristics that is not found in an old composition. *In re Pearson*, USPQ 181 USPQ 642 (CCPA 1974).

Furthermore, the Declaration is more limiting in scope that the scope of the present claims. The present claims do not mention anything about the "RCP" (resistance to the rapid propagation of crack) value as used in the Declaration to demonstrate comparative data.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rena L. Dye whose telephone number is 703-308-4331. The examiner can normally be reached on Monday -Thursday 8:30 AM - 7:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Olszewski can be reached on 703-308-5183. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9326 for regular communications and 703-872-9327 for After Final communications.

14. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

Rena L. Dye
Primary Examiner
Art Unit 3627

R. Dye
July 15, 2002